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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,258	10/09/2003	Yung-Yu Chang	33144-197951	7523
26694	7590	09/27/2004		
VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998				
			EXAMINER PHAM, MINH CHAU THI	
			ART UNIT	PAPER NUMBER

1724

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/681,258	CHANG, YUNG-YU	
	Examiner	Art Unit	
	Minh-Chau T. Pham	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) ☐ Notice of Informal Patent Application (PTO-152) |
| 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) ☐ Other: ____ |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yee et al (5,958,096).

Yee et al disclose an air filter (10) for an internal combustion engine (col. 3, lines 46-49) and the air filter comprising a filter assembly for filtering particles from air prior to the air entering into the internal combustion engine, a base frame assembly (44) connecting to the filter assembly (10) comprising a base ring connecting to the filter assembly and having a top and a ring configuration with an outer annular edge and a central through hole (see details of 20 in Fig. 2), a connecting bracket mounted and held in the central through hole in the base ring (44) having a clean air outlet (58), and an inner frame (20) mounted on the base ring (44) having multiple vanes (50) mounted on and extending upward from the top of the base ring (44) wherein each of the vanes (50) having an outside leg and an inside leg formed beside the bottom recess and the outside legs of the vanes (50) connect integrally to the connecting ring mount and the inside legs of vanes are attached to joining block together over the clean air outlet (58) of the connecting bracket (see details of 20 in Fig. 2). Yee et al further disclose a filter element (22) being tapered (col. 5, lines 24-25) having an inner space and a bottom opening defined in the bottom communicating with the inner space and co-axially

aligned with the top opening and the bottom of the filter element (22) mounted on the top of the base ring (44) (see details of 22 in Fig. 2). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a filter assembly as taught by Yee et al to provide efficient fuel mixing while increasing engine efficiency and prolonging engine life (col. 1, lines 8-16).

Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yee et al (5,958,096), in view of Huang (6,258,144 B1).

Claims 4-7 call for a first filter element and second filter element mounted together in the filter assembly. Huang discloses a filter assembly for a vehicle engine comprising a primary filter element (11) being tapered communicating with the inner space co-axially aligned with the top opening and the bottom of the filter element (11) mounted on top of the base ring (13) and a top end cap (14) attached to the top of the filter element (11) to cover the top opening, a secondary filter element (12) attached to the bottom around the hole of the top connecting ring, being tapered, an inside bottom end cover (13) attached to the bottom of the secondary filter element to cover the bottom opening (see details of Fig. 2). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a double filtering element as taught by Huang in the filter apparatus of Yee et al to provide a two cone-shaped filtering members co-axially mounted with each other and the two ends of the filter device are opened to allow air flowing therethrough so as to obtain more fresh air having certain speed (col. 1, lines 10-14).

Conclusion

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Ng-Gee-Quan (6,319,298 B1) discloses an air filter for vehicles.
- DePietro, III et al (6,340,375 B1) disclose an air cleaner.
- Kim (6,158,412) discloses an air turbulence generator for internal combustion engines.
- Mochida (5,685,887) discloses a filter element.
- Mochida (5,549,724) discloses a filter element of air cleaner unit.
- Kim (5,113,838) discloses an air flow system for an internal combustion engine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Minh-Chau Pham

Patent Examiner

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September 23, 2004